

## **ABSTRACT OF THE DISCLOSURE**

In one aspect this invention provides a data processing system (10) that includes a plurality of self-organizing software agents (40) capable of autonomously establishing relationships between themselves, where the totality of the relationships can be represented by a topological structure having nodes that each contain one of the plurality of software agents and links between the nodes that are the established relationships. The data processing system further includes a topology tuning function that obtains information that is descriptive of the topology and, based at least in part on the obtained information and on at least one criterion, that makes a recommendation to at least one of the plurality of software agents that is intended to modify the topology. In one embodiment the topology tuning function is performed by a topology tuner software agent (20), while in another embodiment the topology tuning function forms a part of a system hosting function, such as a part of the operating system of the system (10).